

Design Concepts for the Papago Trail

from the
Walking into the 21st Century
[Pedestrian and Bicycle Safety Roadshow](#)
April 23, 24, and 25 1997
Pueblo Grande Museum, Phoenix, AZ



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INTRODUCTION



The Maricopa Association of Governments (MAG) is the regional planning agency for the Phoenix, Arizona metropolitan area. In 1994, MAG initiated the Walking into the 21st Century program. The program is intended to increase awareness about walking, and provide tools and incentives that will result in more infrastructure for pedestrians and more policies that support walking as a viable alternative transportation mode. As part of the Walking into the 21st Century Program, MAG works with the Arizona Department of Transportation (ADOT), the Regional Public Transit Agency (RPTA) and the Federal Highways Administration (FHWA) to sponsor an annual event designed to increase knowledge about designing facilities that encourage people to walk, instead of driving in single occupancy vehicles.

In the past, MAG worked with these agencies to sponsor conferences on planning and designing facilities for walking, featuring such national experts as Andreas Duany, Stephen Calthorpe, and Antone Nelleson. In addition, MAG develops and adopts Guidelines and Policies for Pedestrian Areas, and provides financial assistance for designing pedestrian facilities that will be prototypes for the region.

This year's annual Walking into the 21st Century annual event was the Pedestrian and Bicycle Safety Roadshow. One component of the Roadshow is a case study where participants use what they have learned to solve actual problems in their community. This report summarizes Roadshow participant recommendations for a critical and unplanned section of the Papago Salado Trail in metropolitan Phoenix.

BACKGROUND ON PARTICIPATING AGENCIES



Papago Salado Association

The Papago Trail is one of a series of projects which are under the auspices of the Papago Salado Association. The not-for-profit Association is a consortium of public agencies such as the Salt River Project, the Rio Salado Advisory Commission, Papago Park Center, Inc., the local governments of Phoenix, Scottsdale and Tempe, and private for and not-for profit organizations including the Pueblo Grande Museum, The Phoenix Zoo, the Desert Botanical Garden, and the Arizona Historical Society Museum which have an interest in the area bounded by 44th Street, College Avenue, Oak Street, and University Drive.

The Association has been in existence since 1992, promotes heritage education and is responsible for several projects to increase tourism and promote an identity for the area. The attractions include the Desert Botanical Garden, the Phoenix Zoo, the Pueblo Grande Museum and Cultural Park, Tovrea Castle, and the Arizona Historical Society Museum.



The Maricopa Association of Governments (MAG)

MAG is the regional planning agency for the Phoenix Metropolitan Region. The MAG pedestrian program is developed by the Pedestrian Working Group. Working Group members include representatives of local jurisdictions, the Arizona Institute of Architects, the Arizona Society of Landscape Architects, and development interests. The program has been in existence for four years, and has resulted in the development of design guidelines and policies for pedestrian areas, three pedestrian events with Andreas Duany, Stephen

Calthorpe, and Alex Sorten as featured speakers, and a pedestrian design assistance program which provides funding for prototypical designs and specifications for pedestrian areas.



Regional Public Transit Agency (RPTA)

The RPTA is the Transit Agency for the Phoenix Metropolitan Area. RPTA supports several pedestrian oriented activities with the understanding the public transit riders are also pedestrians for part of their trip. This year, RPTA introduced the “Feet First” award into their Clean Air Campaign awards. The award is given for outstanding public and private efforts to promote design and construction of facilities that encourage walking.



Arizona Department of Transportation (ADOT)

The Arizona Department of Transportation participates in the MAG Pedestrian Working Group. Through its enhancement fund ADOT supports the design and construction of projects statewide. In 1996, the ADOT Transportation Enhancement Fund Review Committee recommended that projects it recommended for funding should consider the MAG Pedestrian Area Design Guidelines in their design and construction.



Federal Highways Administration (FHWA)

The Federal Highways Administration, through the Intermodal Surface Transportation Efficiency Act, has provided funding and assistance for a series of pedestrian oriented projects in the region. It supported the development of the MAG Design Assistance Program and the Pedestrian Area Design Guidelines, and was active in pedestrian education events sponsored by MAG.



Pueblo Grande Museum and Cultural Park

Pueblo Grande Museum is a City of Phoenix facility located along the section of the Papago Salado Trail used for the Roadshow case study. The Museum is committed to providing safe multi modal access for its patrons. In the future, the Museum plans to provide access to the Park of Four Waters, located to the south directly across the Grand Canal from the Museum. The Museum generously provided its community room and audio visual equipment for the Roadshow.

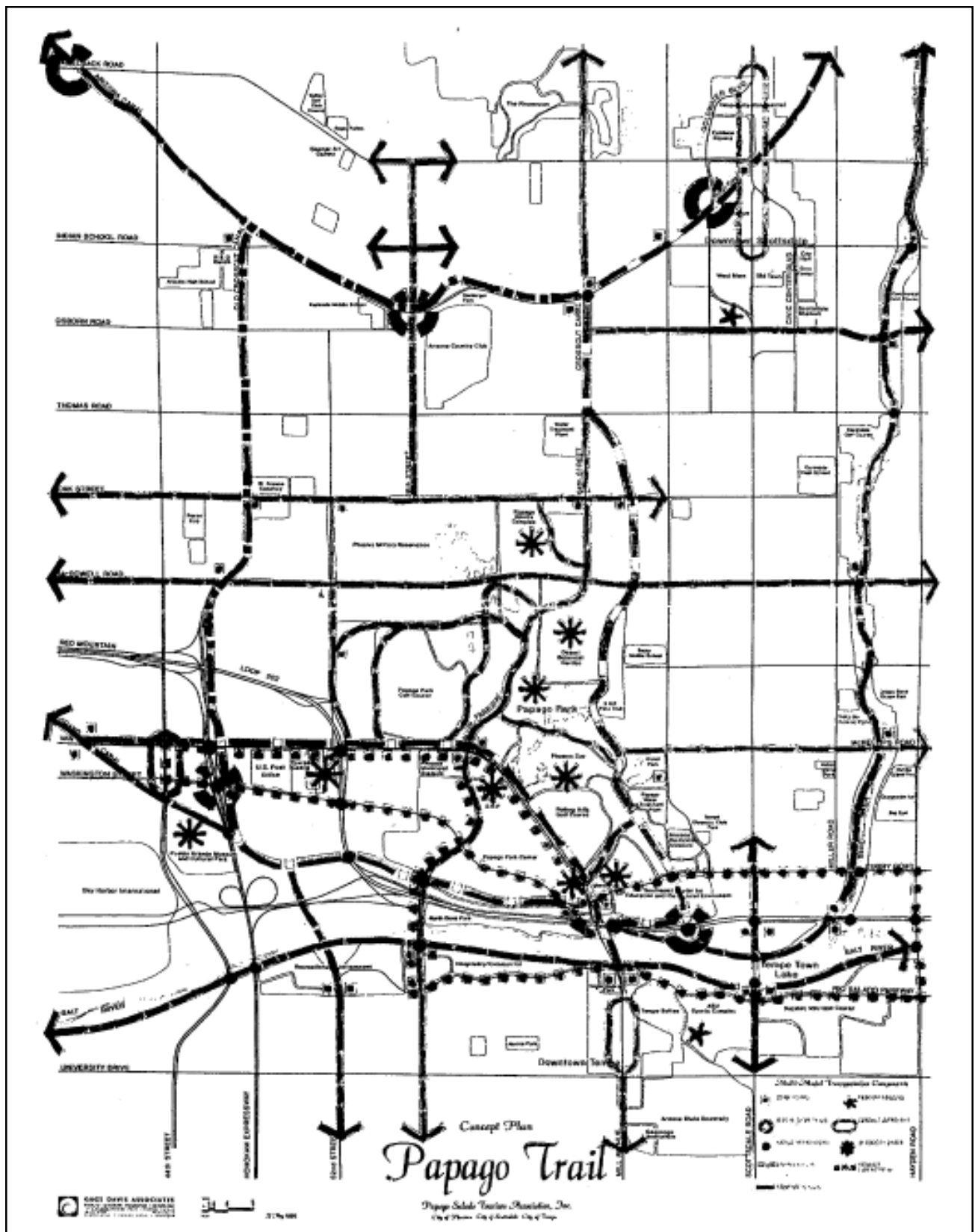
Roadshow Participants

Almost fifty practicing planners, engineers, and designers, many of whom are also avid bicyclists or walkers, participated in the Roadshow and case studies. The participants represented local, state, and federal government departments and agencies, private design firms, and not-for-profit organizations. Most were experienced in bicycle and pedestrian safety and design issues.

THE PAPAGO TRAIL

The concept for the Papago Trail originated with the Metropolitan Canal Alliance, an organization dedicated to preserving and enhancing the Valley's canal system. The Papago Salado Association adopted the project in 1995.

The Papago Trail is 11 miles long. Several portions of the trail exist today. However, no work has been done on the section between McDowell Road and the Grand Canal through the Pueblo Grande Museum and Cultural Park. This section was the focus of the Roadshow case study.



Papago Trail Concept

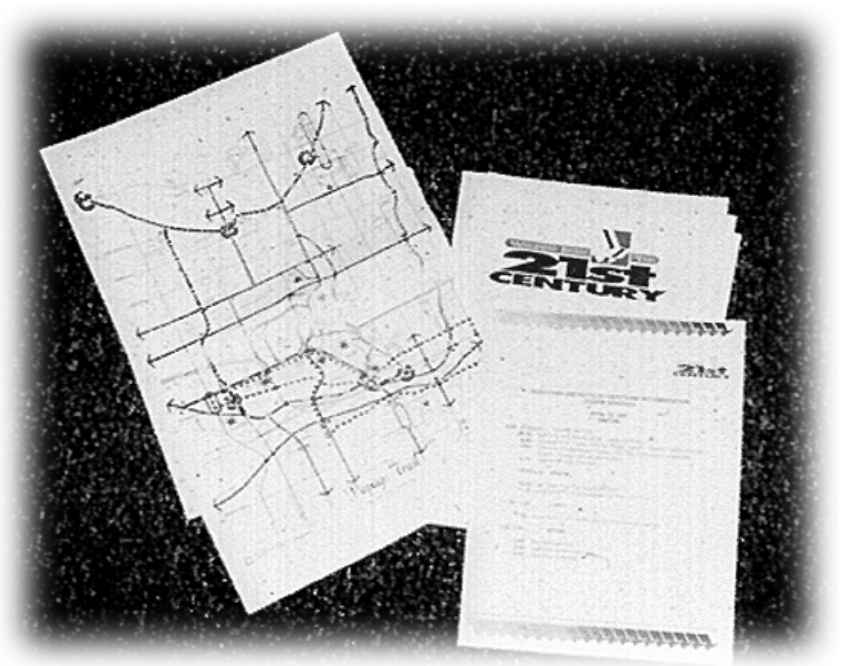
The trail generally follows the Old Crosscut Canal from its intersection with the Arizona Canal north of Indian School Road at 48th Street south to the Pueblo Grande Museum and Cultural Park. It continues along the bank of the Grand Canal to the Crosscut Canal alignment, and then turns north following the Crosscut Canal to its connection to the Arizona Canal at 64th Street.

The canal is a critical connection between the Papago Salado attractions and other significant multi-use alternative mode routes. These include central Phoenix (along the Arizona Canal), the Phoenix Indian School Park (along the Grand Canal), downtown Tempe and Tempe's Rio Salado Park (along the Grand Canal, Salt River and *Atkinson Topeka Santa Fe* railroad tracks), and downtown Scottsdale (along the Crosscut Canal and Hayden Bend Wash).

THE WALKING INTO THE 21ST CENTURY PEDESTRIAN & BICYCLE SAFETY ROADSHOW

The Pedestrian and Bicycle Safety Roadshow is offered by the Federal Highway Administration and National Highway Traffic Safety Administration. The Roadshow has been conducted throughout the nation. Elizabeth Ann Drake, principal of Drake & Associates, is the *principal instructor* for the event, and she is usually joined by a public safety official. In the Arizona Roadshow John Moffat, Director, Washington Traffic Safety Commission joined Ms. Drake.

Participants in the Roadshow were provided a variety of materials, including a map of the case study area, the MAG Pedestrian Area Policies and Design Guidelines, and a Coursebook.



The Roadshow covers a variety of topics related to pedestrian and bicyclist safety. An important component of the course is experiential learning. Participants used wheelchairs to understand some of the difficulties faced by those who cannot walk.

Participants learn how to negotiate curb cuts with instructor John Moffat



Goggles, simulating a variety of visual conditions gave participants an idea of what a person with diabetes, cataracts, or other visual disabilities might see.

Simulations with melons and eggs were used to demonstrate the impacts of crashes and the importance of helmets.

Design was a substantial focus of the course. Design issues were discussed from the point of view of the user, and from a liability perspective. Policies, such as enforcement and facilities that aid in enforcement were also a major focus of the three-day Roadshow.

At the conclusion of the Roadshow, participants were asked to discuss relevant issues related to pedestrian and bicycle planning. This discussion was lively, and covered a broad spectrum of areas, including increasing the awareness of the public about these types of facilities, funding, liability, and working with local governments.



A participant negotiates a cross walk wearing goggles that simulate diabetes

CASE STUDY TOPICS

The Roadshow participants were asked to address the following questions in their case studies:

How should the trail connect to the Grand Canal, along 44th Street or through the Pueblo Grande Museum?

How should the trail connect to other features in the area, in particular, Tovrea Castle and to other trails?

How are crossings for bicyclists, pedestrians, and the disabled to be addressed?

What types of opportunities exist for transfers and exchanges with other modes?

How would the Museum be integrated into the trail, and how would archaeological resources be preserved and secured?



*Roger Lidman, Museum Director,
discusses the planning topics
with Roadshow participants*

CASE STUDY RESULTS

The participants were divided up into four groups. Each group included a mix of planning, design, and engineering professionals.

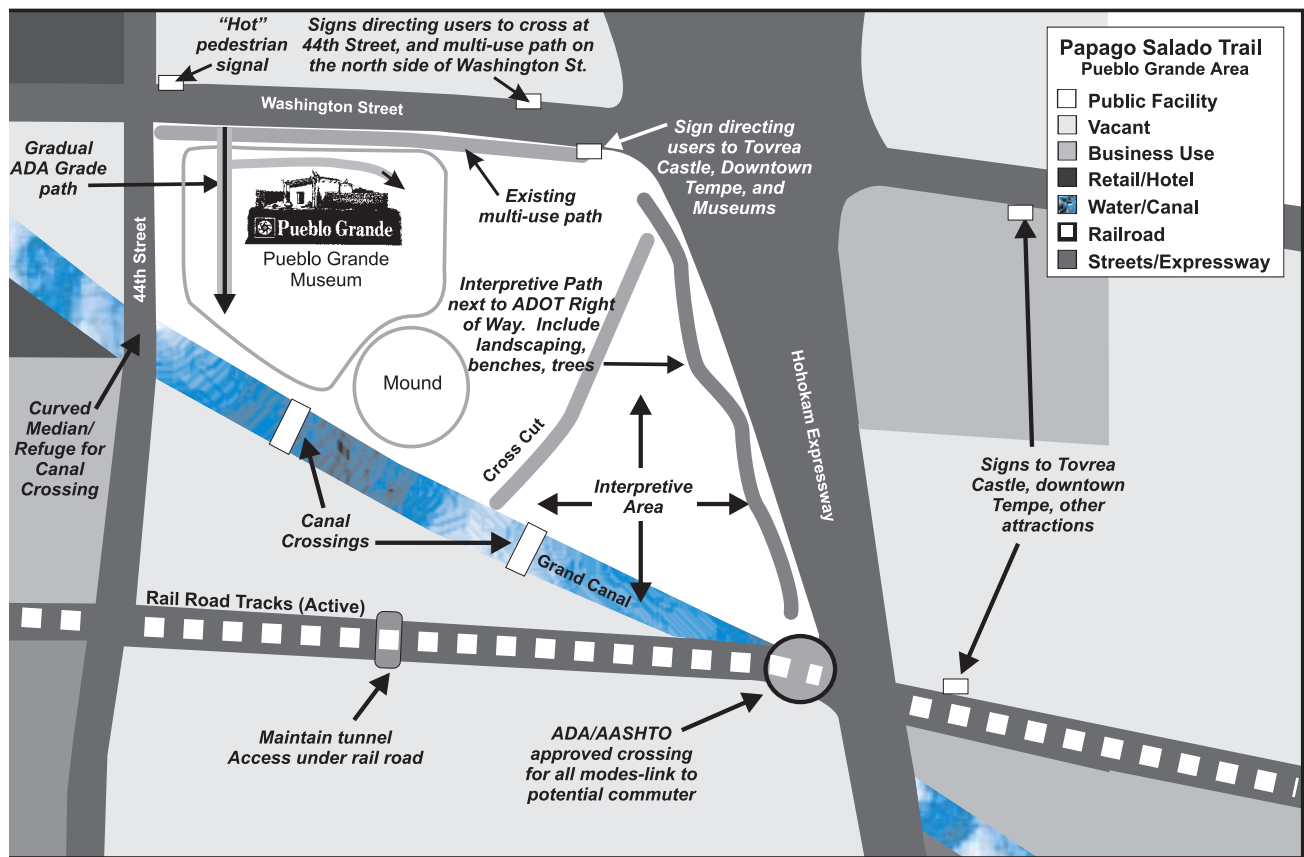
Case Study #1:

This group recommended the trail extend south on 44th Street from McDowell to Washington Street. The trail would cross Washington at 44th Street. A 'hot' pedestrian activated signal would be located at the 44th Street Crossing. Multi use paths would be provided on the north side of Washington Street (they already exist on the south side of the street) for those coming south from Tovrea Castle. Signs along the north side of Washington Street would direct travelers to cross at 44th Street.



Case Studies were presented on aerial maps of the area.

At the intersection of the Trail with the Hohokam Expressway, the Trail would turn south along the freeway alignment to its intersection with the railroad tracks. Signs at the intersection of the trail with the Hohokam expressway and the railroad tracks would direct the traveler to destinations such as downtown Tempe, Tovrea Castle, and other attractions. An Americans with Disabilities Act (ADA) and American Association of Street and Highway Transportation Officials (AASHTO) approved



Papago Case Study #1

crossing would be constructed at the juncture of the trail and railroad tracks, and it would remain a potential commuter rail link. The trail would then turn east, along the railroad towards downtown Tempe.

Additional improvements included a recommendation for an ADA grade path from Washington Street through the Museum parking lot to the Museum. At 44th Street and the Grand Canal, a curved median refuge was recommended to increase safety for those connecting to the Papago Trail via the Grand Canal. The existing tunnel under the rail road track should be maintained for access to the planned Park of Four Waters. Crossings over the Grand Canal should be provided to prevent crossings at the head gate at the intersection of the Grand and Crosscut Canals.

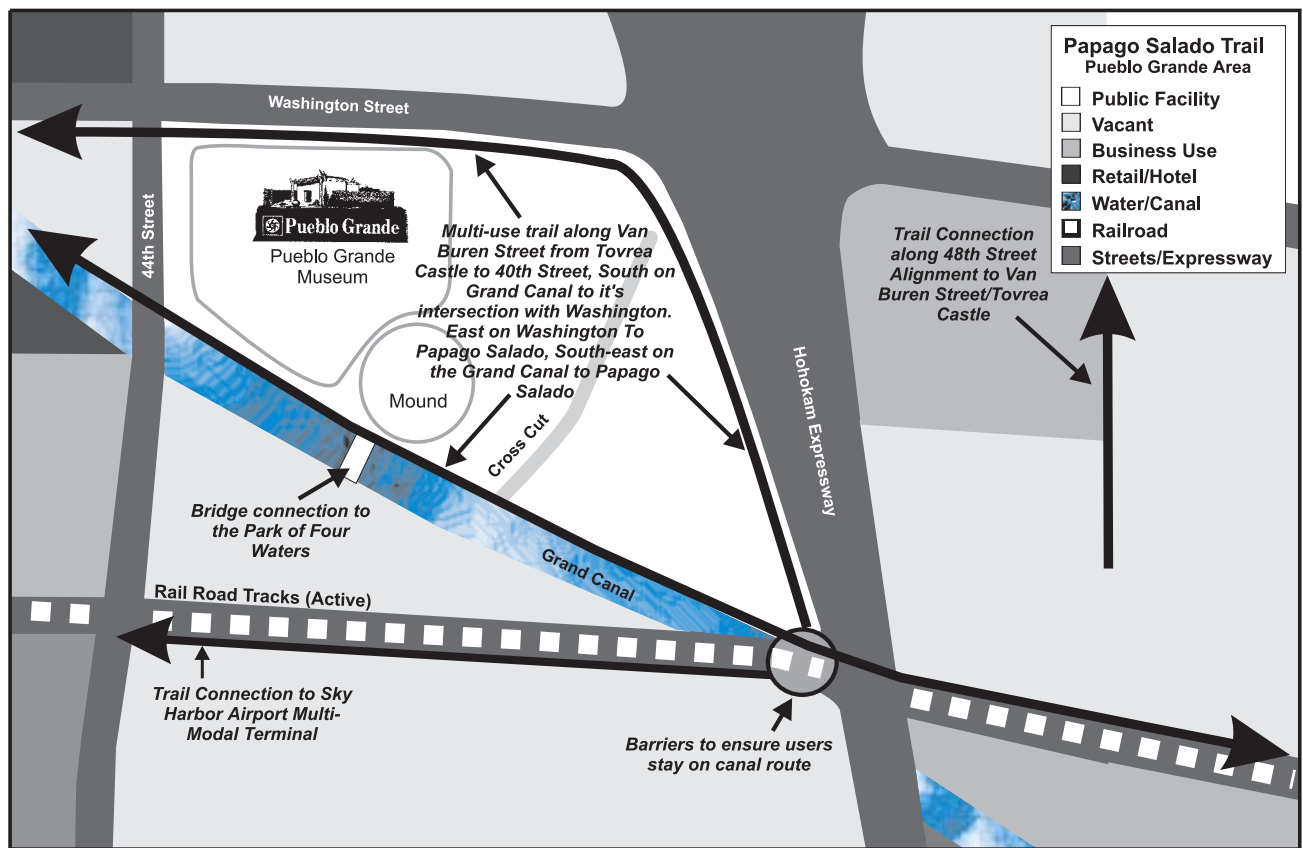
Case Study #2

Case Study #2 recommends the Papago Trail proceed east from Tovrea Castle along Van Buren Street to its intersection with 44th Street. The trail would then proceed south along 44th Street to the south side of Washington Street. Existing improvements along Washington Street would be used as the trail proceeds east to the Hohokam Expressway. At the Hohokam the trail would follow the right-of-way south to the railroad tracks, and proceed east along the Grand Canal to the Rio Salado. Barriers at the intersection of the trail with the canal would make sure that users stayed on the canal route, and did not follow the railroad tracks.



*One group works on
its case study.*

This study also identified a secondary route along the north side of the Grand Canal and the junction of the Papago Trail and the railroad tracks. A bridge over the Grand Canal would provide controlled access to the Park of Four Waters. A third connection to a multi-modal terminal at Sky Harbor Airport would be developed to the west along the existing rail road tracks. A connection along the 48th Street alignment would connect the trail to Tovrea Castle.



Papago Case Study #2

Case Study #3

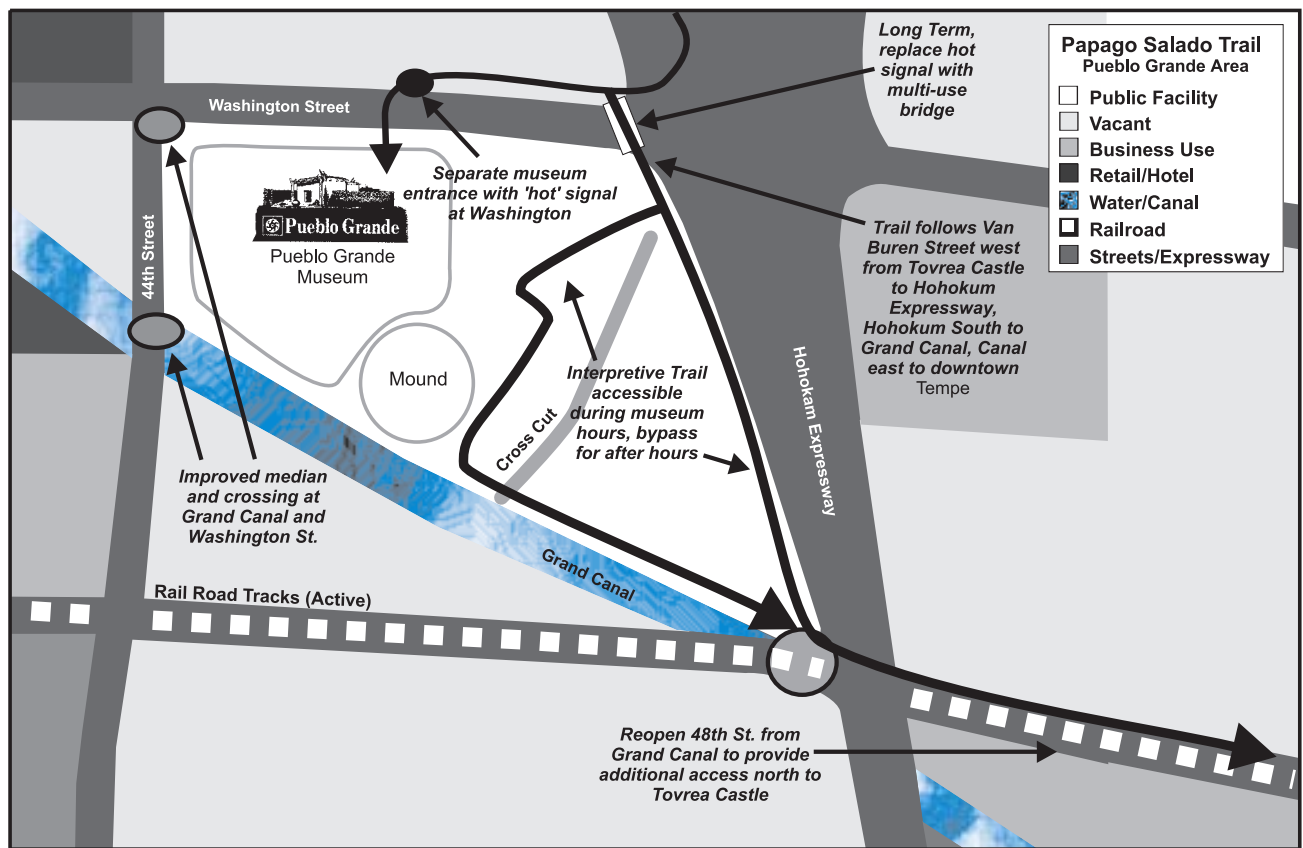
The trail would follow Van Buren Street from Tovrea Castle west to its intersection with the Hohokam Expressway, and south along the Hohokam to its intersection with Washington Avenue. At Washington Avenue, a hot signal pedestrian activated signal would be provided for crossing. A spur trail on the north side of Washington Street would be provided to facilitate entry into the Museum. A second hot signal would be provided on Washington Street mid-block between 44th Street and the Hohokam for the Museum.



Before making recommendations for the Papago Trail, participants tried options simulating some of the disabilities that trail users might have.

The main trail would follow the alignment of the Hohokam from Washington Street to its intersection with the railroad. A spur trail, open during Museum hours, would be provided along the old cross cut canal. The trail would include interpretive signs and refuge areas with shade and water. This portion of the trail would be constructed in a manner that would not disturb archaeological resources.

A secondary trail, along the 48th Street alignment to Tovrea Castle would provide direct access to Tovrea from downtown Tempe and the Rio Salado Park. Improved median and crossings at Washington and 44th Street and the Grand Canal and 44th Street would be provided.



Papago Case Study #3

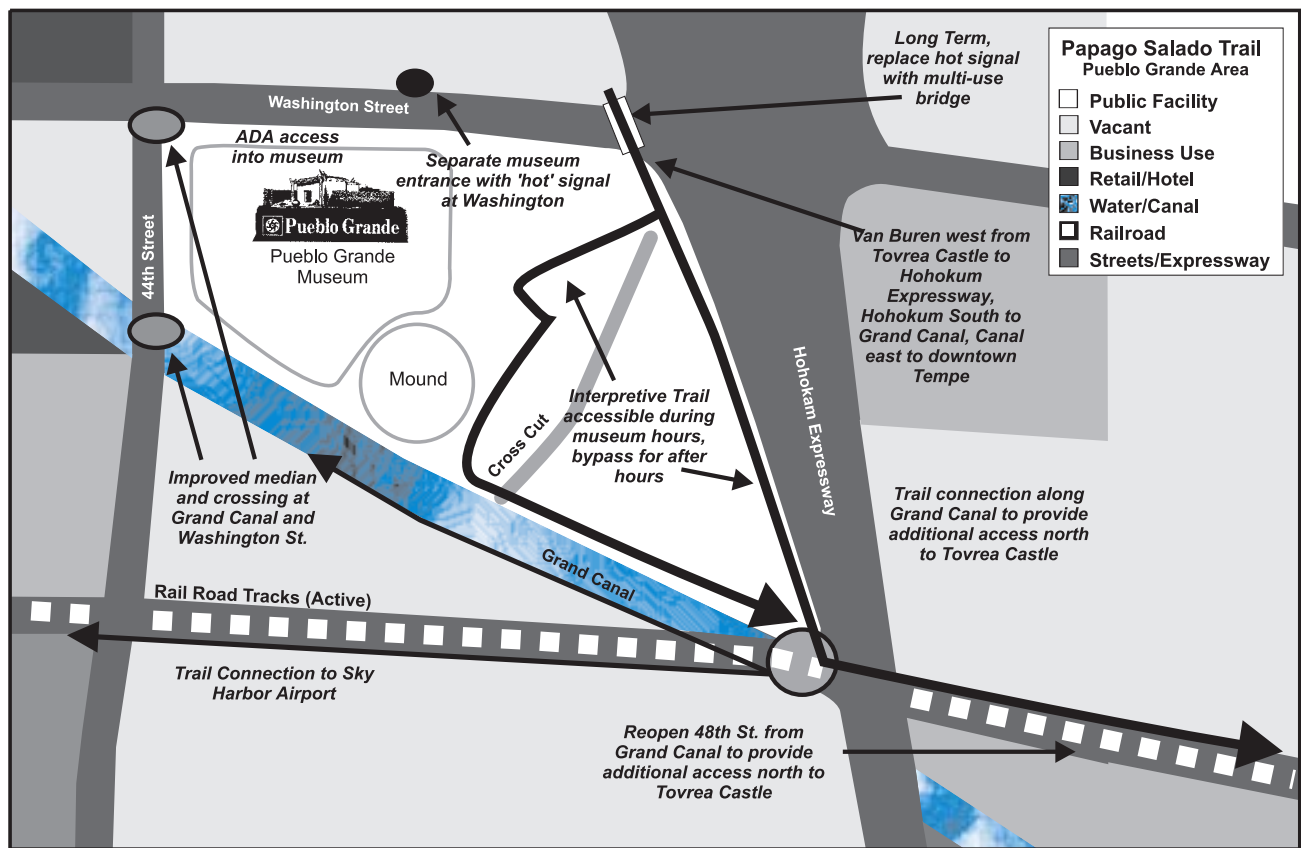
Preferred Scenario

The preferred scenario focuses on elements in each case study that link the resources in the Papago Salado Association target area, and provide opportunities for enhanced bicycle and pedestrian travel.

The alignment described in Case Study 3 is preferred. Right-of-way along the Hohokam can easily be secured from ADOT. Extending the trail west along Van Buren could be accomplished with signs and better use of existing right of way. Additionally, the concept of a spur trail through the Pueblo Grande Museum offers an opportunity for controlled access to the Museum and provides a substantial link with an important destination in the Papago Salado target area.

The Connections along the Grand Canal to the Phoenix Indian School Park and Sky Harbor Airport identified in Case Study 2 are also included in the preferred scenario. These connections are important to integrating the trail and the destinations along the Papago Trail into a larger multi-modal network.

The hot pedestrian activated signals suggested in Case Study 1 are included in the scenario at 44th Street and Washington, and the Hohokam and Washington. In the future, if traffic warrants, a hot signal should be installed at the intersection of the Grand Canal and Washington Street. This is a particularly dangerous crossing as vehicles emerge from a dip in the roadway immediately south of the canal and may not see people crossing the road at the juncture of the canal and the road. Medians and pedestrian refuges are recommended for the Washington and 44th Street crossing, an improved median strip is recommended for the crossing at 44th Street and the canal.



Preferred Scenario

Signs directing users to attractions along the route are recommended in Case Study 1 and this scenario. The bridge crossing the canal to the planned Park of Four Waters and maintaining the crossing under the railroad tracks is recommended here. The barriers to ensure travelers do not go off the trail and follow the railroad tracks instead of the canal were considered important to the safety of those using the trail.

Providing ADA access into the museum is also recommended. A route for disabled travelers using public transit would be to cross Washington Street at 44th Street (where the bus stops), and then use the multi-modal facility on the south side of Washington to enter the museum.